

**REMARKS:**

Reconsideration and allowance of the above-referenced application are respectfully requested.

**I. STATUS OF THE CLAIMS**

Claims 1, 8, 22, and 25 are amended herein. No new matter is presented.

In view of the above, it is respectfully submitted that claims 1-4, 8-12, 18, and 20-26 are currently pending and under consideration.

**II. SPECIFICATION**

In item 2 on page 2 of the Office Action, the Examiner indicates that the title of the invention is not descriptive and that a new title is required that is clearly indicative of the invention to which the claims are directed.

Applicants respectfully submit that the title of the present invention is indicative of the claimed invention which recites, for example, a solid-state imaging element (see line 1 of claim 1).

In view of the above, it is respectfully submitted that the Examiner's assertion is overcome.

**III. REJECTION OF CLAIMS 1-4 UNDER 35 U.S.C. §102(B) AS BEING ANTICIPATED BY KAMASZ (U.S. PATENT NO. 5,650,352)**

The present invention as recited in claim 1, for example, relates to "[a] solid-state imaging element, comprising: a plurality of light-receiving sensors converting optical signals to electrical signals, the plurality of light-receiving sensors arranged in v x h (vertical x horizontal) matrix; and a memory storing the electrical signals as optical image data, said memory being formed of a plurality of line buffers, and the number of the plurality of line buffers arranged in the vertical direction is a value which is more than 1 and less than v."

Kamasz is directed to a method of making CCD readout registers having multiple outputs. Kamasz discusses,

...an exemplary embodiment of the invention has been applied to a full frame CCD image sensor 80 comprising 5040X5040 photoelements, a horizontal register 82, the photoelements and horizontal register having a pitch of 12 microns, 8 separate output taps 84 being equally spaced on the horizontal shift register, 16

sections of vertical clocks 86, three polysilicon gates, buried channel processing, metal bus straps for signals running vertically along channel isolations between pixels, and a second layer of metal serving as a light shield over the non-imaging sections of the image sensor. (See column 8, lines 36-45.)

In item 5 on page 4 of the Office Action, the Examiner asserts, "[t]he HCCD is made up of 8 line buffers with 8 output taps [84], and the number of the plurality of line buffers arranged in the vertical direction is less than  $v$  (line buffers = 8 is less than  $v = 5040$ )."

However, as can be seen from the above discussion, Kamasz is silent regarding the use of line buffers and that the teaching of a "memory being formed of a plurality of line buffers and the number of the plurality of line buffers arranged in the vertical direction is a value which is more than 1 and less than  $v$ ", recited in claim 1, is not disclosed anywhere in Kamasz.

Thus, Kamasz does not teach or suggest, either expressly or inherently, each and every element as set forth in the independent claim 1, thus claim 1 is distinguishable over Kamasz.

For at least the above-mentioned reasons, claims depending from independent claim 1 are patentably distinguishable over Kamasz.

In view of the above, it is respectfully submitted that the rejection is overcome.

#### IV. REJECTION OF CLAIMS 22 AND 25 UNDER 35 U.S.C. §102(B) AS BEING ANTICIPATED BY MORIMOTO (U.S. PATENT NO. 5,969,759)

Morimoto is directed to a solid-state image sensing device. As noted by the Examiner, Morimoto at column 7, lines 14-27 states,

...[w]hen the vertical drive pulse is commonly used for the partial image sensing areas 101a-101d, signal charges for the horizontal lines, which are shifted by the differences in the numbers of stages of the dummy vertical transfer electrodes, are transferred to the respective horizontal CCD registers 102a-102d. The signal charges of the individual image sensing areas 101a-101d, transferred to the horizontal lines, which are shifted by the differences in the numbers of stages of the dummy vertical transfer electrodes, are transferred to the respective horizontal CCD registers 102a-102d, are output in parallel via the output sections 103a-103d which are provided adjacent to the respective horizontal CCD registers 102a-102d.

However, nothing in the above-described teachings of Morimoto discloses or suggests "a plurality of  $k$  line buffers, each line buffer holding up to  $m$  pixels of image data, and the number of the plurality of line buffers arranged in the vertical direction is a value which is more than 1 and less than  $v$ " (see claim 22). Similarly, claim 25 recites, "the plurality of line buffers is

arranged in a vertical direction and is a value which is more than 1 and less than v." Therefore, Morimoto does not disclose the features as recited in claims 22 and 25.

In view of the above, it is respectfully submitted that the rejection is overcome.

**V. REJECTION OF CLAIMS 8-12 UNDER 35 U.S.C. §103(A) AS BEING UNPATENTABLE OVER KAMASZ IN VIEW OF JUEEN (U.S. PATENT NO. 5,818,524)**

Independent claim 8 recites, "an electrical signal holder within said solid-state imaging element comprising line buffers, wherein the number of the plurality of line buffers arranged in the vertical direction is a value which is more than 1 and less than v."

Kamasz and Jueen, alone or in combination do not teach or suggest an image processor including, "line buffers arranged in the vertical direction is a value which is more than 1 and less than v."

In view of the above, it is respectfully submitted that the rejection is overcome.

**VI. ALLOWABLE SUBJECT MATTER**

Claims 18, 20, 21, 23, 24, and 26 are allowed.

**VII. CONCLUSION**

In view of the foregoing amendments and remarks, it is respectfully submitted that each of the claims patentably distinguishes over the prior art, and therefore defines allowable subject matter. A prompt and favorable reconsideration of the rejection along with an indication of allowability of all pending claims are therefore respectfully requested.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 06/13/2006  
1201 New York Avenue, NW, Suite 700  
Washington, D.C. 20005  
Telephone: (202) 434-1500  
Facsimile: (202) 434-1501

By:   
Temnit Afework  
Registration No. 58,202